

What is claimed is:

1. A system of providing picture information in a mobile communication network comprising:

5 a plurality of mobile terminals, each with a display device for displaying a picture information;

a plurality of base station which process originating and terminating call signals of said plurality of mobile terminals and allocate a channel for transmitting a picture information of
10 an originating mobile terminal to a terminating mobile terminal;

a mobile switching center which receives and processes said originating and terminating call signals from said plurality of the base station, and transmits the picture information of the originating mobile terminal to the terminating mobile terminal
15 through the allocated channel;

a picture service controller which stores the picture information of the originating mobile terminal and outputs the picture information of the originating mobile terminal to the mobile switching center; and

20 a communication service provider operating center which registers users of said plurality of mobile terminals and controls the picture information service.

2. A system of claim 1, wherein the picture information
25 of the originating mobile terminal is either one of a picture information which represents a characteristic of a user of the

originating mobile terminal, or picture information which the user of the originating mobile terminal wishes to transmit

3. A system of claim 1, wherein the picture information
5 of the originating mobile terminal is picture information registered by the user of the originating mobile terminal in the picture service controller through the communication service provider operating center.

10 4. A system of claim 3, wherein the user of the originating mobile terminal registers the picture information using one or either a picture recognition device or a camera.

15 5. A system of claim 3, wherein the user of the originating mobile terminal generates the picture information using an external input device and registers the generated picture information.

20 6. A system of claim 1, wherein the picture information is a picture information provided by the communication service provider operating center.

7. A system of claim 1, wherein the picture service controller comprises:

25 a data transmitting/receiving unit which performs data communication with the communication service provider operating

center or the mobile switching center;

a caller identifier detecting unit which detects an identifier of the originating mobile terminal from an output signal of the data transmitting/receiving unit;

5 a control unit which controls storage of picture information of said plurality of mobile terminals received through the data transmitting/receiving unit and outputs a stored picture information corresponding to said identifier; and

10 a caller information generating unit which receives and outputs to the data transmitting/receiving unit the stored picture information as the picture information of the originating mobile terminal, under the control of the control unit.

8. A system of claim 7, wherein the picture service
15 controller further comprises:

an identifier managing unit which manages identifiers of the plurality of mobile terminals in a database under the control of the control unit; and

20 a picture memory which stores the picture information of the plurality of mobile terminals and outputs the stored picture information under the control of the control unit.

9. A system of claim 8, wherein the picture memory
25 classifies and stores the picture information of the plurality of mobile terminals according to each caller under the control of the control unit.

10. A system of claim 8, wherein the picture memory classifies and stores the picture information of the plurality of mobile terminals according to each user registered in the communication service provider operating center under the control
5 of the control unit.

11. A system of claim 1, wherein the terminating mobile terminal receives and converts a size of the picture information of the originating mobile terminal in conformity to a size of the
10 display device.

12. A system of providing caller identification information in a mobile communication network comprising:

a plurality of mobile terminals, each with a display device
15 for displaying a caller information;

a plurality of base station which process originating and terminating call signals of said plurality of mobile terminals and allocate a channel for transmitting a caller information of an originating mobile terminal to a terminating mobile terminal;

20 a mobile switching center which receives and processes said originating and terminating call signals from said plurality of the base station, and transmits the caller information of the originating mobile terminal to the terminating mobile terminal through the allocated channel;

25 a picture service controller which stores the caller information of the originating mobile terminal and outputs the

caller information of the originating mobile terminal to the mobile switching center; and

a communication service provider operating center which registers users of said plurality of mobile terminals and controls the caller information service.

13. A system of claim 12, wherein each mobile terminal has a speaker and wherein the caller information is one or a combination of a picture information, a character information, and an audio information.

14. A system of claim 12, wherein the picture service controller comprises:

a data transmitting/receiving unit which performs data communication with the communication service provider operating center or the mobile switching center;

a caller identifier detecting unit which detects an identifier of the originating mobile terminal from an output signal of the data transmitting/receiving unit;

a control unit which controls storage of caller information of said plurality of mobile terminals received through the data transmitting/receiving unit and outputs a stored caller information corresponding to said identifier; and

a caller information generating unit which receives and outputs to the data transmitting/receiving unit the stored caller information as the caller information of the originating mobile

terminal, under the control of the control unit.

15. A system of claim 14, wherein the picture service controller further comprises:

5 an identifier managing unit which manages identifiers of the plurality of mobile terminals in a database under the control of the control unit;

10 a picture memory which stores picture information of the plurality of mobile terminals and outputs a stored picture information as the stored caller information under the control of the control unit;

15 a character memory which stores character information of the plurality of mobile terminals and outputs a stored character information as the stored caller information under the control of the control unit; and

20 an audio memory which stores audio information of the plurality of mobile terminals and outputs a stored audio information as the stored caller information under the control of the control unit.

16. A caller information transmitting method in a mobile communication network with a picture service controller for storing and managing caller information of a plurality of mobile terminal users, the method comprising:

25 transmitting a request from a mobile switching center to the picture service controller for a search and transmission of a

caller information of a first mobile terminal, if a first mobile terminal requests for a call connection to a second mobile terminal;

searching and transmitting from the picture service controller the caller information of the first mobile terminal to the mobile switching center; and

transmitting from the mobile switching center the caller information and a paging signal of the first mobile station to the second mobile terminal.

17. A method of claim 16, wherein the caller information of the first mobile terminal is a picture information.

18. A method of claim 16, transmitting the request for a search and transmission of a picture information of the first mobile terminal, if a user of the first mobile terminal selects to perform a picture information transmission.

19. A method of claim 16, wherein transmitting to the second mobile terminal a picture information of the first mobile terminal with a paging signal through at least one paging channel.

20. A method of claim 19, wherein transmitting the paging signal through a main paging channel and transmitting the picture information through a secondary paging channel.

21. A method of claim 16, wherein transmitting to the second mobile terminal a picture information of the first mobile terminal with traffic data through a traffic channel.

5 22. A caller information transmitting method in a mobile communication network having a picture service controller for storing and managing picture information of a plurality of mobile terminal users, the method comprises:

 (a) generating a caller information of a user;

10 (b) registering the caller information in the picture service controller; and

 (c) transmitting the registered caller information to a terminating mobile terminal.

15 23. A method of claim 22, wherein the caller information is one or a combination of a picture information, a character information or an audio information.

20 24. A method of claim 22, wherein the caller information is one of either a picture information representing a characteristic of the user or a picture information which the user desires to transmit.

25 25. A method of claim 22, wherein in (a) generating a picture information as the caller information using a picture recognition device or a camera.

26. A method of claim 22, wherein in (b) registering the generated caller information together with a corresponding mobile terminal identifier.

5 27. A mobile terminal with a caller identifier comprising:
a caller identifier detecting unit which detects a caller identifier from an input data and receives a caller information transmitted a radio channel if caller identifier corresponds to its own caller identifier;

10 a signal processing unit which processes and outputs the caller information received by the caller identifier detecting unit;

a control unit which controls storage and output of the processed caller information;

15 a memory which stores the processed caller information from the signal processing unit under the control of the control unit;

a display unit which displays the caller information output from the signal processing unit under the control of the control unit.

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